

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works

DEPARTMENT

G.O. No.	231	(Ry)	Press
B.P. No.			Mts.
Dated	25.1.	1876	

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
23rd January 1876.*

No. 497. Read the following letter from Lieutenant-Colonel J H M SHAW-STEWART, R E., Consulting Engineer for Railways, to Major-General G W WALKER, R E., Secretary to Government, Public Works Department, dated Madras, 20th January 1876, No 33 —

ADVERTING to the Proceedings of Government, under date the 22nd April 1875, No. 1,136, I have the honor to forward for sanction an estimate, amounting to Rupees 16,323, of the cost of protecting the Bangalore Branch of the Madras Railway at a point where it passes through a cutting immediately to the south of the "Tiger Rock" Three letters,* which have passed upon the subject between this office and the Agent of the Madras Railway, are submitted for the information of Government.

* From Agent, No 1,156, 18th November 1875
To " " 1,233, 19th "
From " " 8, 6th January 1876

2 It will be seen that the point at which protection is now required is distinct from the cutting known as the "Tiger Rock" cutting, for the protection of which an estimate, amounting to Rupees 8,347, was sanctioned in the above-quoted Proceedings of Government The cutting in which danger is now foreseen could not have been avoided by the proposed diversion to which allusion was made in my letter, dated the 13th April 1875, No 208 Within the last few days I have inspected the line near this point in company with the Acting Chief Engineer, and I am now satisfied that the protective work is necessary, and that it will, so far as can be seen, provide permanently for the security of the Railway The danger against which protection has become necessary, has arisen from the tendency exhibited by the rock formation at this point to disintegrate rapidly upon exposure to the atmosphere and weather The process has been so rapid that what was solid rock during the construction of the line in 1864, immovable except by blasting, is now in great part a mass of soft crumbling material, a portion of which is carried away by every shower of rain If this action continues unchecked, the overhanging hill-side must be undermined to the great danger of the Railway.

3. After careful examination, it has been determined to treat this cutting in a manner similar to that adopted at the "Tiger Rock" cutting, and to cover in the mass of decomposed unsound material with a substantial retaining wall of granite, so as to protect it from all further effects of the action of atmosphere and weather This work is provided for in the estimate now recommended for sanction.

4 It is of great importance that this cutting should not be exposed, in its present state, to the action of another monsoon, and I have accordingly authorized the immediate commencement of the proposed work in anticipation of sanction.

From R B ELWIN, Esq., Agent and Manager of the Madras Railway Company, to Lieutenant-Colonel J. H M SHAW-STEWART, R E., Consulting Engineer for Railways, dated Madras, 18th November 1875, No 1,156

With reference to previous correspondence, I have the honor to forward you herewith an estimate* of the cost of constructing a retaining wall, 570 feet long by 20 feet high, for the cutting south of the Tiger Rock, on the Bangalore Branch, rendered necessary in consequence of

* In duplicate

*Proceedings of the Madras Government, Public Works Department,
28th January 1876.*

the disintegration of the rock, and I request that you will be so good as to communicate to me the sanction of Government for the required expenditure, viz, Rupees 16,323

2 The necessity for this work was considered at the Meeting held in my office on the 26th ultimo

3 It is proposed to meet the expenditure from the additional Budget grant applied for in my letter of to-day, No 1,153, if authorized The date on which the sanction will lapse is entered on the estimate

From Lieutenant-Colonel J H M SHAW STEWART, R E, Consulting Engineer for Railways, to R B ELWIN, Esq, Agent and Manager of the Madras Railway Company, dated Madras, 19th November 1875, No 1,233

In acknowledging receipt of your letter, No 1,156, dated the 18th instant, I have the honor to request that the Chief Engineer may be asked to furnish full explanation with regard to the necessity for the large additional expenditure which he now proposes to incur in protecting the line through the "Tiger Rock" cutting

2 I also request that a plan and elevation may be furnished, showing, upon a large scale and in as full detail as possible, the protective works already executed at the cutting in question, those in hand, and the additional works now proposed

3 In connection with the proposals now brought forward, I beg to draw attention to your letter, dated the 4th March 1875, No 239, and to the comparative estimate which accompanied it You will remember that the cost of the alternative line, suggested by Mr. Anderson, by which the "Tiger Rock" cutting was avoided, was at that time compared with the sum (Rupees 8,347) which it was then hoped would secure the cutting, for some years at least, against accident It is now clear that, in order to form a correct judgment in the matter, the latter sum must be largely increased, and looking to the probability that still further expenditure will be entailed from time to time in maintaining the safety of the cutting, it seems desirable to reconsider the question I shall be glad to know Mr Anderson's opinion upon this point

4 I beg to be furnished with a copy of the comparative estimate which accompanied your letter, No 239, the original having been mislaid

From R B ELWIN, Esq, Agent and Manager of the Madras Railway Company, to Lieutenant-Colonel J H M SHAW-STEWART, R E, Consulting Engineer for Railways, dated Madras, 6th January 1876, No 8

I HAVE the honor to inform you that the Acting Chief Engineer writes to me as follows with reference to your letter, No 1,233, of the 19th of November 1875 —

"The Consulting Engineer is under a misapprehension in supposing that the expenditure he refers to is for the 'Tiger Rock' cutting' This work will be completed, and the cutting rendered perfectly secure for the original estimate, but the cutting south of the Tiger Rock cutting was found to be in such a dangerous state that immediate steps had to be taken to protect the line, and it is for this work that the estimate forwarded with the Chief Engineer's letter of the 25th of October 1875 was prepared

"It will not be possible to give the Consulting Engineer the detailed plans he asks for, as the retaining walls are built under rocks, which are irregularly distributed along the cutting

"The alternate line suggested by Mr Anderson, and referred to by the Consulting Engineer, would not affect the cutting in question, which is to the south of the proposed diversion "

2 I trust that, under the circumstances, you will be able to sanction the estimate forwarded with my letter, No 1,156, of the 18th November last

*Proceedings of the Madras Government, Public Works Department,
28th January 1876.*

No 498. ORDER THEREON, 28th January 1876, No. 231.

RAILWAY, No 45.

BEFORE submitting this estimate for the sanction of the Government of India, the Governor in Council desires to be informed of the date on which work was commenced by the Railway Authorities, and the outlay which has been already incurred.

(True Extract)

Major-General, R E.,
Secretary to Government.

To the Consulting Engineer for Railways

Edw. T. O'CONNOR.
Sp. Copies

Railway Dept

Cons. Engr's Office
Madras 19th November '75.
N^o 1233

To
The Agent and Manager
M. Railway Company

Sir,

In acknowledging receipt
of your letter, N^o 1156, dated the
18th instant, I have the honour
to request that the Chief En-
gineer may be asked to furnish
full explanation with regard
to the necessity for the

large additional expenditure
which he now proposes to incur
in protecting the line through
the Tiger Rock cutting.

I also request that a
plan and elevation may be fur-
nished, showing upon a large
scale and in as full detail as
possible, the protective works,
already executed at the cutting in
question, those in hand, and
the

the additional works now proposed.

3.

In connection with the proposals now brought forward, I beg to draw attention to your letter dated the 4. March 1875, No 239, and to the comparative estimate which accompanied it. You will remember that the cost of the alternative line, suggested by Mr. Anderson, by which the Tegeri Rocks cutting was avoided, was at that time compared with the sum (£8,347) which it was then hoped would secure the cutting for some years at least, against accident. It is now clear that, in order to form a correct judgment in the matter, the latter sum must be largely increased; and looking to the probability that still further

expenditure will be entailed, from time to time, in maintaining the safety of the cutting, it seems desirable to reconsider the question. I shall be glad to know Mr. Anderson's opinion upon this point.

4. I beg to be furnished with a copy of the comparative estimate which accompanied your letter, No 239; the original having been mislaid.

I have, &c.,

Wm. H. M. Shaw-Stewart Esq.
Cons. Eng. for Railways

/ True Copy /

Wm. H. M. Shaw-Stewart Esq.
Cons. Eng. for Railways

Ed
Cuopp

No 1156

MADRAS RAILWAY

AGENT AND MANAGER'S OFFICE

Madras, 18th November 1875.

From

Robert B. Davis Esq.
Agent and Manager of the M.R.

To

Christophorus J. H. M. Shaw Stewart
Consulting Engineer for Railways

Sir,

With reference to previous correspondence, I have the honour to forward for perusal an Estimate of the cost of constructing a Retaining Wall 570 feet long by 26 feet high for the Cutting South of the Tiger Rock, on the Bangalore Branch, rendered necessary in consequence of the disintegration of the rock, and I request that you will be so good as to communicate to the sanction of Government for the required expenditure, namely Rs 16323.

2. The necessity for this work was considered at the Meeting held in my Office on the 26th ult.

3. It is proposed to meet.

W. 486/96.

Dec. 28th 1875, P. B. 117.

No 8

70
MADRAS RAILWAY

AGENT AND MANAGERS' OFFICE.

Madras, 6th January 1876.

the expenditure from the additional
Budget fund applied for in my
letter of today at 1153, if
authorised. The date on which
the sanction will lapse is entered
on the Estimate.

I have the honour to
be
Yours most obedient
servant
W. J. Carter
Agent and Manager.

the work for, whether retaining or not

CONSULTING ENGINEER'S OFFICE

Machine $2\frac{1}{2}$ Hensons 1876

8/10

The alternative suggested by
"Mr. Anderson and referred to by the
Consulting Engineer, would not affect
the cutting in question which is to the
"South of the proposed diversion"

2 I trust that under the circumstances you will be able to sanction the estimate forwarded with my letter of 11th 56 of the 18th November last

I have the honour to be
Sir

Your most obedient Servant

A. P. Rowe

Agent and Manager

RAILWAY DEPARTMENT

CONSULTING ENGINEER'S OFFICE

Madras 20th January 1876

No 38

From

LIEUT. COLONEL J H M SHAW-STEWART, R.E.,

Consulting Engineer for Railways

To

MAJOR-GENERAL G W WALKER, R.E.,

Secretary to Government,

Public Works Department,

Fort Saint George.

SIR, I have the honor to forward for sanction an estimate, amounting to Rs 16,323, of the cost of protecting the Bangalore branch of the Madras Railway at a point where it passes through a cutting immediately to the south of the "Tiger Rock". Three letters, which have passed upon the subject between this office and the Agent of the Madras

From January 9 8
To 16 1876
From Agent N. H. 1876

MADRAS RAILWAY

From

The Agent and Manager

To

The Consulting Engineer

for Railways

20th January 1876
J. H. M. Shaw-Stewart

Respecting the estimate
as to the expenditure
required for carrying
out the work south
of Tiger Rock Cutting

1-77-486/26

Pro. 28th Jan 16 P. H. 1876

Alaskan Railway, are submitted for the information of Government.

2. It will be seen that the point at which protection is now required is distinct from the cutting known as the "Tiger Rock" cutting, for the protection of which an estimate, amounting to \$8,347, was sanctioned in the above-quoted Proceedings of Government. The cutting in which danger is now foreseen could not have been avoided by the proposed diversion to which allusion was made in my letter dated the 13th April 1875 No. 208. Within the last few days I have inspected the line near this point, in company with the Acting Chief Engineer, and I am now satisfied that the protective

protective work is necessary, and that it will, as far as can be seen, provide permanently for the security of the railway. The danger against which protection has become necessary, has arisen from the tendency exhibited by the rock formation at this point to disintegrate rapidly upon exposure to the atmosphere and weather. The process has been so rapid that what was solid rock during the construction of the line in 1864, is now in great part a mass of soft crumbling material, a portion of which is carried away by every shower of rain. If this action continued unchecked, the overhanging hill-side must be undermined, to the

The great danger of the railway
cut was in after careful exami-
nation, it has been determined
to treat this cutting in a manner
similar to that adopted at the
"Tiger Rock" cutting, and to cover
in the mass of decomposed un-
sound material with a substan-
tial retaining wall of granite,
so as to protect it from all fur-
ther effects of the action of at-
mosphere and weather. This
work is provided for in the es-
timate now recommended for
sanction. It is of great im-
portance that this cutting should
not be exposed, in its present
state, to the action of another
monsoon; and I have accordingly
authorised

authorised the immediate commencement
of the proposed work, in anticipa-
-tion of sanction.

I have the honor to be

Live

Yours most obedient servant

1. Mountain ^{to} Point 10, 20,

Cons. Engineer for Railways

1. The first part of the document is a list of names, including "John", "Mary", "James", "Elizabeth", "Thomas", "Sarah", "Michael", "David", "William", "Richard", "Henry", "George", "Charles", "John", "Mary", "James", "Elizabeth", "Thomas", "Sarah", "Michael", "David", "William", "Richard", "Henry", "George", "Charles".

Handwritten notes at the top of the right page, including "H. 28" and "M. 18/1".

Handwritten notes in the upper middle section of the right page.

Handwritten notes in the middle section of the right page.

Handwritten notes in the lower middle section of the right page.

Handwritten notes at the bottom of the right page.

RAILWAY DEPARTMENT.

From
The Consulting Engineer
for Railways

To
The Secretary to Government,
P. W. Department,
Fort Saint George

Dated 29 January 1876.
Recd

No 33

Pro. 28th Jan 16 B. 1. 49. 1
The sanction of Government
in the construction of
the railway line from
Pondicherry to the
at a point where it
passes through a
village immediately
to the south of the
Barrack

FORMER CASES

Current No of 187

"
"
"
"

P. M. WORKS FORM No 3
Current No 486
1876 Sept.

From

The Comptroller
for Railways.

No 33.

Dated 20th 23 January 1876.

Enc 3/1

Subject -

Submitting for
the sanction of Govt an
Estimate for protecting
the Bangalore Branch
of the M. Ry. at a point
where it passes through
a cutting immediately
to the south of the Tiger
Rock.

ENCLOSURE

From

1 Estimate sent
to Govt of India
with Letter No 585
3rd Mar/75

Orders and Proceedings in file

Depart- ment	No	Date	ENDORSEMENTS.		
			Depart- ment	No	Dated
P.M.	245	21/7/74			
"	246	24/7/74			
"	277	24/7/75			
"	258	24/7/75			

G.O. No 231. 28.1.76

No 231

Public Works Department

PROCEEDINGS OF THE MADRAS GOVERNMENT.

UNDER date the

28th Jan'y 76

Read the following. -

From
The Comptroller
for Railways

(H. No 33 dated 20 January/76)

Before submitting this
estimate for the sanction of the
Government of India, the
Government in Council desires to be informed
of the date on which work was
commenced by the Railway
Authorities, and the outlay
which has been already
incurred.

LATER CASES

Current No of 187

"
"
"

B.N. 497

Ar 24-1-76.

Carriage for 21
22/11
Drpd - 11-2-76

Ans
1876

Oct. 11 1876

PUBLIC WORKS.

Comdr. Eugene Fox
Ryals

My dear Sir:
I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the Public Works of the State. I am sorry to hear that you are unable to visit the State at the present time. I will endeavor to have the necessary arrangements made for your visit as soon as possible.

18/11/76

No. 497-498

I enclose herewith a copy of the report of the Board of Public Works, which will show the progress of the work done during the year ending 31st Dec. 1875. I also enclose a copy of the report of the Board of Public Works, which will show the progress of the work done during the year ending 31st Dec. 1875.

N^o 497-498

Respectfully,
Your obedient servant,
Eugene Fox

Ans 24-76